Battle Force Interoperability (BFI) Operation Advisory Group (OAG)

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Interoperability Issues
Impact BG Operations

- Battle Groups (BG) deployed with both legacy and new ships (combat/C4I systems)

- The Navy is aggressively fielding new ships, C4I systems, technologies to meet warfare needs, ie. CEC

- Legacy ships and systems still and will continue to play a critical role in BG operations

- Legacy ship C4I systems need investment to:
  - Improve Battle Force capability
  - Achieve desired mission capability
  - Optimize Battle Force performance/impact of new ships, systems and technologies
  - Allow new systems to realize design objectives

Fleet and engineer partnership needed to resolve interoperability shortfalls
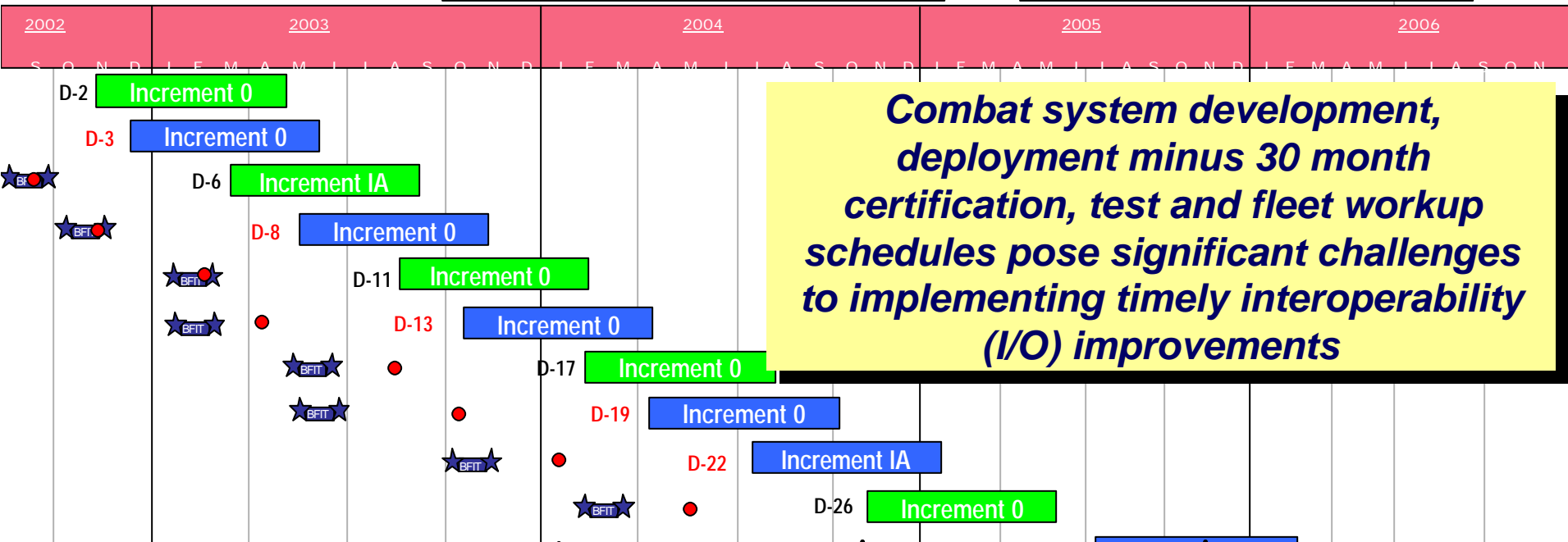
BFI OAG Drivers
(Schedules & Configurations)

NAVSEA — NAVAL SEA SYSTEMS COMMAND

⭐ BFIT ⭐ Stars denote BF Interoperability Test Dates   🔴 Red Dot denotes established TCD Date

| 2002 | 2003 | 2004 | 2005 | 2006 |

S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N

D-2 — Increment 0
D-3 — Increment 0
D-6 — Increment IA
D-8 — Increment 0
D-11 — Increment 0
D-13 — Increment 0
D-17 — Increment 0
D-19 — Increment 0
D-22 — Increment IA
D-26 — Increment 0

Combat system development, deployment minus 30 month certification, test and fleet workup schedules pose significant challenges to implementing timely interoperability (I/O) improvements

	Increment 0 2000 Baseline	Increment I 2001 w/o CEC	Increment IA 2001 with CEC	Increment II 2005+ Open Arch.
BG Configuration Elements **Including Approved TTP**	AEGIS B/L 5.3, and B/L 2.1 ACDS Block 0 Link 16 Model 4/5 E-2C Group I	AEGIS B/L 5.C, B/L 5.3 and B/L 6.1 ACDS Block 1 CEC B/L 2 Link 16 Model 4/5 E-2C Group I/II	AEGIS B/L 5.3, B/L 6.1 ACDS Block 1 CEC B/L 2.1 B/L 2.2 Link 16 Model 4/5 E-2C Group I/II	AEGIS B/L 6.3, B/L7 Ph 1 SSDS Mk II Navy Open Architecture CEC B/L 3 or JCTN B/L 1 Link 16 Model 5 or JDN B/L 1, E-2C Group II
Measurement Opportunities	2000, BGITs & BGSITs,	99 - 00 Underways, CEC OPEVAL, BGITs & BGSITs,	2000 Underways, BGITs; CEC OPEVAL,	BFITs & BGSITs, OPEVALs and Development Tests

BFI OAG Issue Sources

D-30	Issue Sources	Source Owner
D-12	BFIT (DEP) 16 D-30 BG Events	NSWCDD
D-12	BG Limitations from Capabilities & Lims	PHCA
D-6	BGSIT (E) 1995-Present	CLF
D-6	BGSIT (W) 1995-Present	CPF
D-6	NCTSI / JITC	NCTSI / JITC
D+	Navy Lessons Learned System (NLLS)	NWDC
D+	BG Post-Deployment Briefs	PEO-TSC/ PMS400
D+	AAW Conference Briefs	TACTRAGRU
D+	Fleet Messages (E-2C, AEGIS, ACDS, etc.)	ISEA (various)
D+	AEGIS Lessons Learned	NSWCDD

Events

D-12

D-6 (TCD)

D-0
- - - - - - - -

Deployment

Fleet Issues

Numerous Independent Uncoordinated Databases; No Single Source of Consolidated Fleet Issues

- **Combine sources to single file (~5,300)**
  - Includes open, closed and duplicate issues
- **Categorize Open Issues (~1,200)**
  - Does not include Open-C and Open-E Issues
  - 21 AAW Categories Created

Plus some additional Issues from the Software Support Activities databases

BFI OAG Mission

Fundamental BFI OAG Elements:

- – Legacy C2 Interoperable by FY08

- – Ensure PPBS considers legacy I/O funding requirements

- – Develop metrics for operationally determining success in overcoming legacy C2 I/O issues

The Navy's Leadership is committed to resolving the Interoperability issues. The BFI OAG is the mechanism.

BFI OAG Approach

- Promote the use of disciplined systems engineering principles to set priorities and allocate funding for measurable incremental interoperability improvements to USN systems (initially AAW focused)

- Produce plans, measure predicted impact and implement corrections to known Battle Force Interoperability problems
  - Support DEPSECDEF C2 Legacy Interoperability Strategy and Milestone Action Plan of 12 October 2001
  - Satisfy OPNAV N76 (RADM Balisle) direction of 21 August 01
  - Satisfy Fleet direction (JFK BFIT TRR) on BFI resolution of 31 May 01

- Prioritize Top BFI issues for correction

- Impact near term Battle Force (BF) deployments

Measurable BF Interoperability Performance Improvements

BFI OAG Annual Closed-Loop Process

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BFI OAG EVENT 3

O-7

O-5/O-6

- **Concur**
- **Adjust**

- Root Cause Analysis
- Develop Technical Alternatives/Risks
- Provide Recommendations
- Understand The Priorities & Requirements
- Develop Solutions
- Develop Cost/Schedule

SEA53
PEO's/SYSCOM's
PM

- Consolidate Issues
- Prepare "implementable" alternatives

BFI OAG EVENT 2
- **Review:**
  - * **Issues**
  - * **Requirements**
  - * **Risks**
  - * **Options**
- **Recommendation**

Consolidated Message

EVENT 1
Input

TARGET BATTLE GROUPS FY 03
JFK 04/LIN 05/TRU 05/ENT 05

Requirements

Assessments

D-30
D-30
D-30

Calendar Year 2003
Implementation and Certification

PPBS

Planning/ Programming Decision

Interoperability Issues Categorized

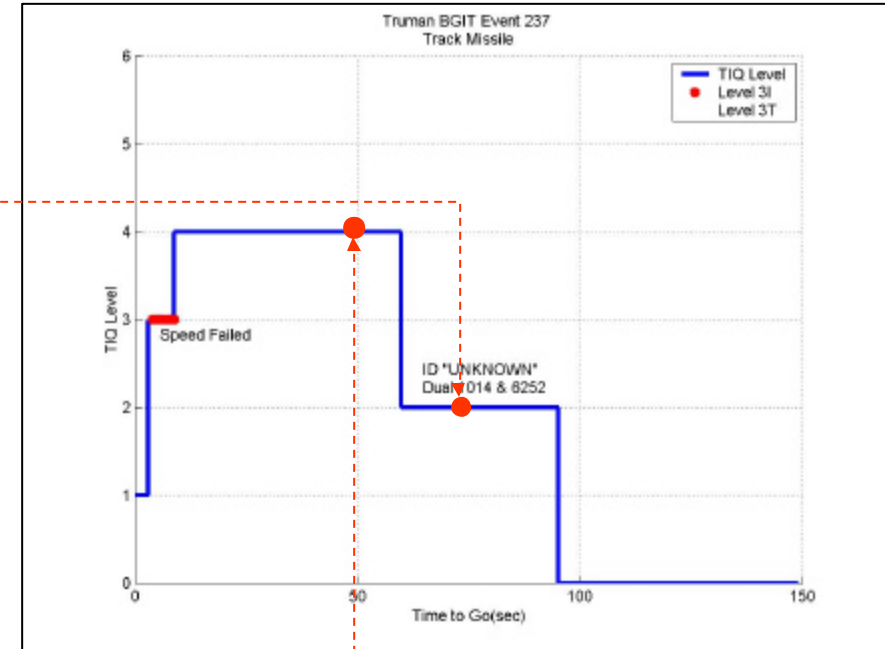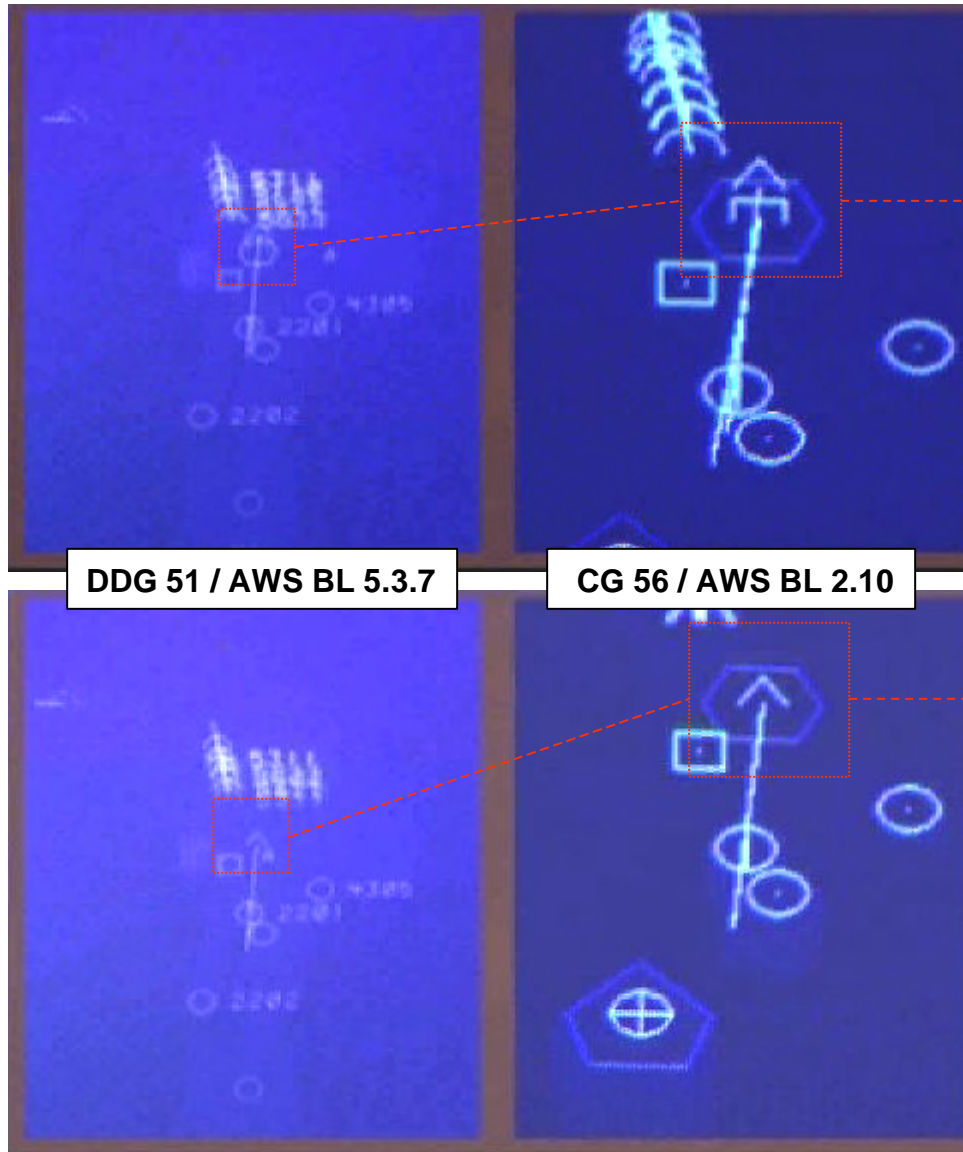| Interoperability Fix Category	Fleet Composite Ranking
MODE 4 INCORRECT (Management)	1
ID DOCTRINE PROBLEMS	2
EXCESSIVE TN CHANGES	3
GRID LOCK (DATA REGISTRATION)	4
SIF INCORRECT (Management and Alerts)	5
TRACKS NOT DISPLAYED ON ALL TRACKS	6
TRACKS NOT CORRELATING	7
ID MANAGEMENT & CONFLICT ALERTS	8
REDUNDANT LOCAL TRACKS	9
TRACKING (INCLUDE DROP TRACKS DOCTINE)	10
REPORTING RESPONSIBILITY CONTENTION	11
FORCE ORDERS PROBLEMS	12
ENGAGMENT STATUS PROBLEMS	13
TRACK FILTER PROBLEMS	14
INCORRECT TRACK QUALITY REPORTED	15
DI CODE ANOMALY	16
EXCESSIVE NCT	17
AIR CONTROL	18
EMERGENCY POINTS/TRACKS	19
OP SPEC VIOLATION	20
REFERENCE POINTS	21

The Goal Is to Apply Our Limited Resources to Categories That Provide the Force With the Most Improvement

Battle Force Interoperability Requirements (BFIR) AAW Summary Metric

TBD

Unambiguous Track

The Force has arrived at a single, common track with consistent, correct ID, position/velocity correct

Hostile (TN 2031)

3t: Single, common track (position/velocity correct), but with ambiguous ID

Logic – "AND"

Friend? / Hostile? (TN 2031)

3t: High Fidelity Track

3i: Correct ID

3i: Dual track reports with a consistent correct ID

(TN 1020, 2031 & 1543)

Logic – "OR"

Force Track Awareness

INCREASING COMMON SITUATIONAL AWARENESS

A Link Track Number (LTN) on an object is shared by Battle Force units

Unit Track Awareness

At least one unit holds track on an object

TIQ Level

5 — 4 — 3 — 2 — 1

Track Information Quality (TIQ)

TIQ
Operator Relationship
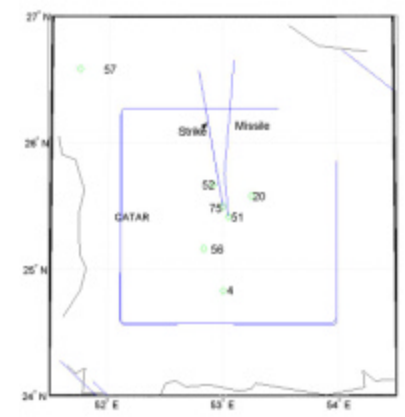
At-Sea Battle Group (BG) Interoperability Performance

- Force performance will be measured across regions, ID types, and in aircraft interaction focus areas
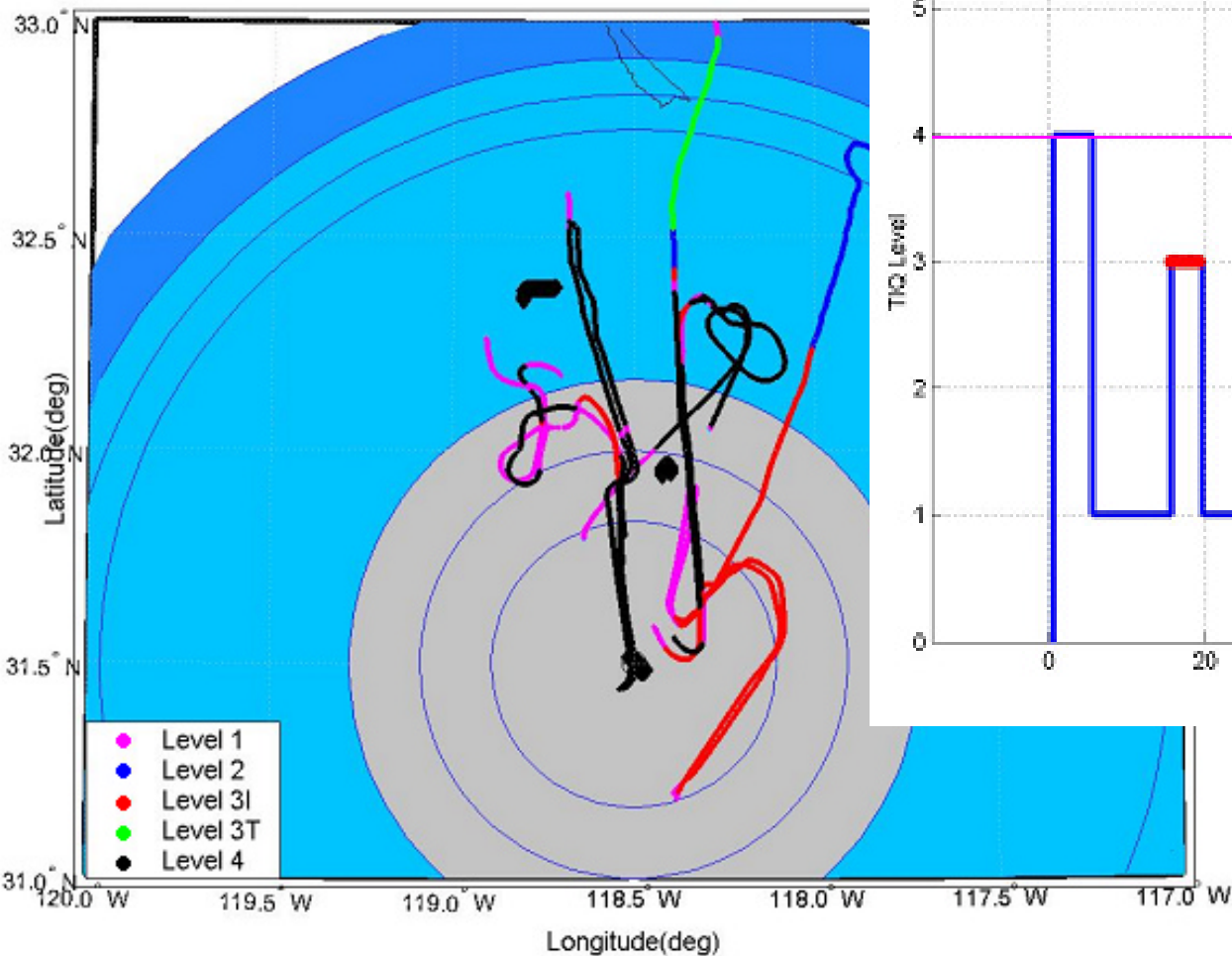
BFIR Composite TIQ Plot
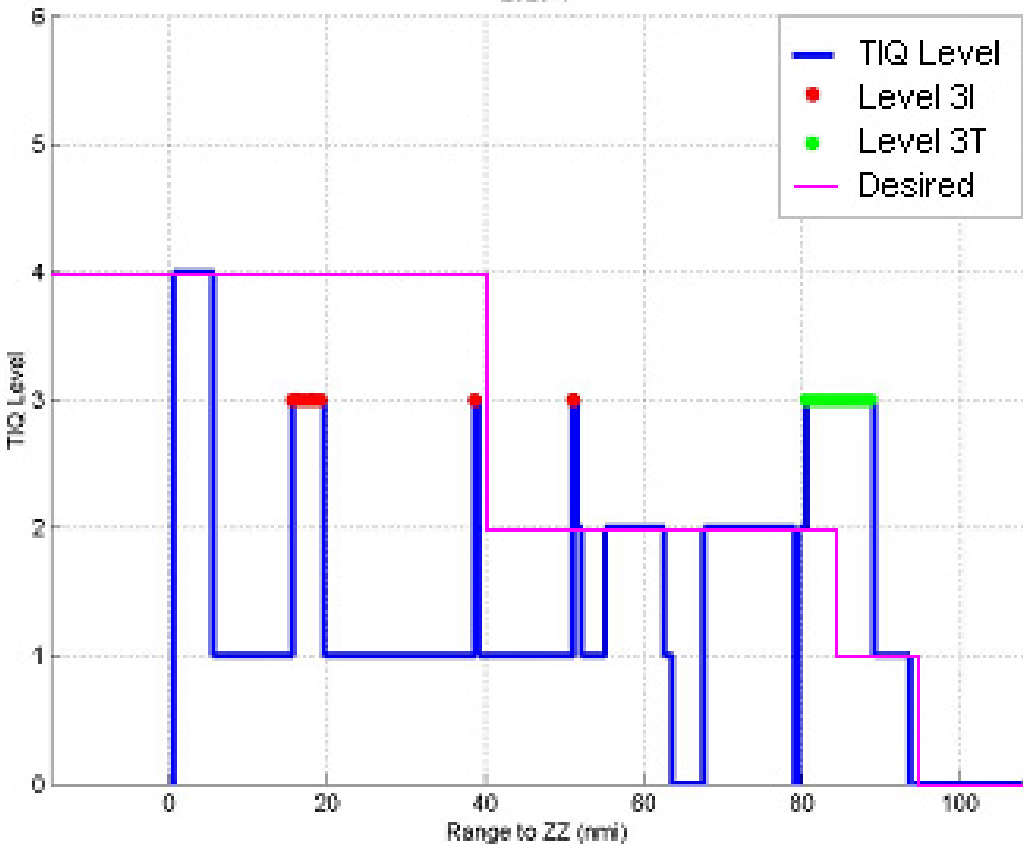
TEL Tracks 1203 & 1204, along with all Missile Tracks Dualing were main contributor of Composite Level 3I..

Level 2 caused by TEL Tracks 1203 & 1204 ID Unknown.

Hostile Aircraft Unknown ID, seen at beginning of run.

BFIR Levels Plot
JFK-1192-5-All-Tracks
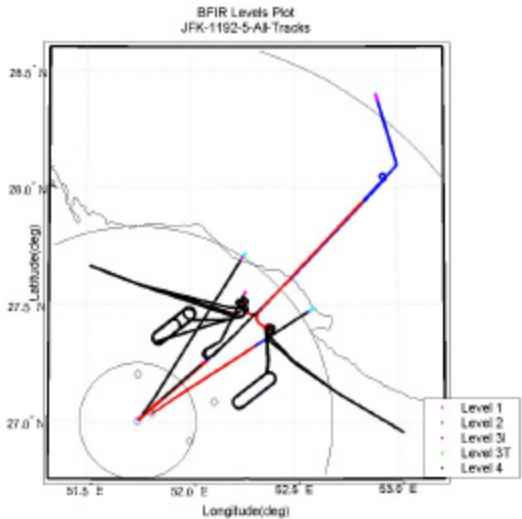
Configuration/Software Comparison

Truman BGIT Event 108
Track Missile

Truman BGIT Event 237
Track Missile
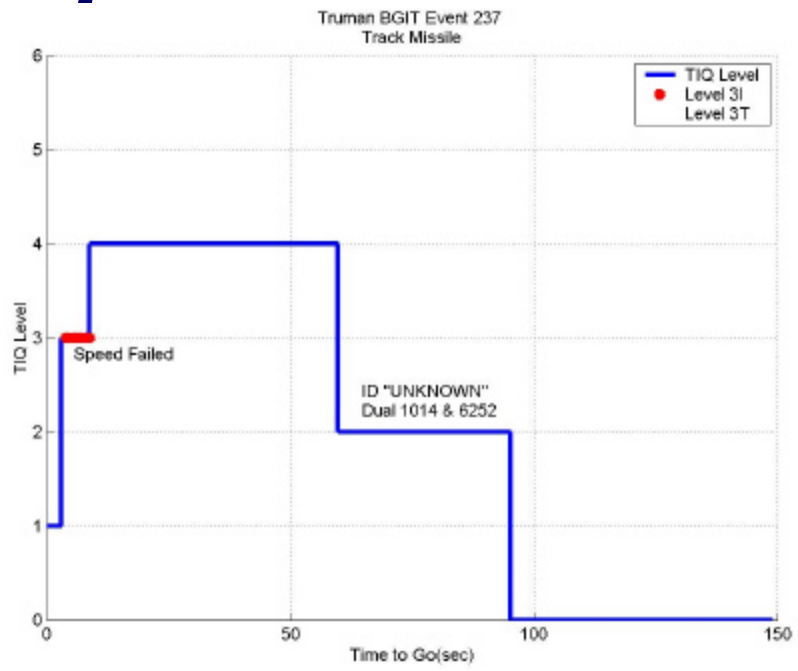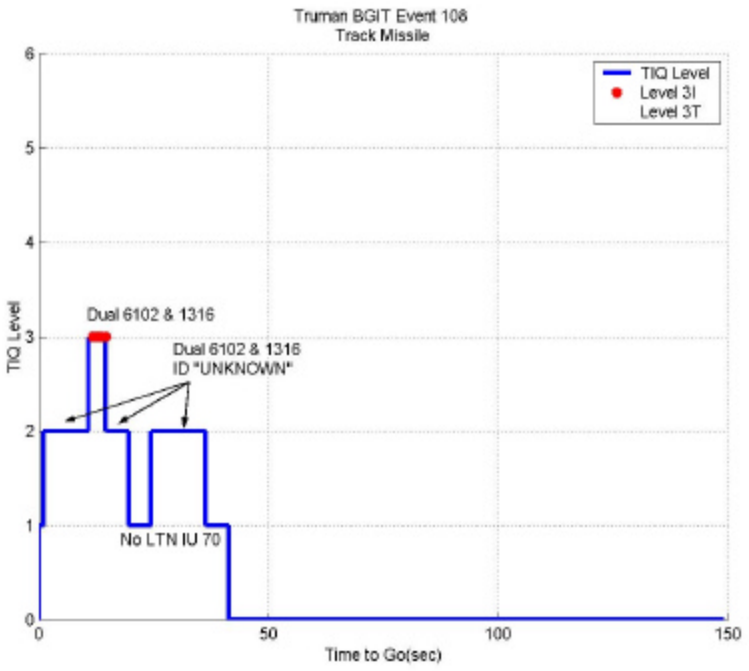
EVENT 0108 GMT

BG UNITS: ***CVN 75 (Data Forwarder)**
*LHA 4
*CG 56
DDG 51 (GRU)
*DDG 57
DD 978
FFG 52
E-2C / GRP II

EVENT 0237 GMT

BG UNITS: ***CVN 75 (Data Forwarder)**
*LHA 4
*CG 56
DDG 51 (GRU)
*DDG 57
DD 978
FFG 52
E-2C / GRP II

Computer program upgrade from AEGIS 5.3.6 to AEGIS 5.3.7 (AWS+C2P+SGS) on 2 platforms. Same T&P Used.

* CS data extraction used for analysis

Demonstration of Measurable Improvement

BFIR Metrics

- Provides:
  - Evolving AAW Force performance evaluation with respect to the war fighting interoperability requirement
  - Disciplined analysis process
  - A force performance and predictive engineering yard stick:
    - ➢ Baseline/configuration pre-deployment evaluation (via Deployment (D-30 month) process)
    - ➢ Change prioritization
    - ➢ Techniques, Tactics & Procedures (TTP) Evaluation
    - ➢ Operational Link employment feedback/guidance
    - ➢ Requirements/predictive engineering and alternative comparison
  - Seventeen BG event database (and growing) provides cornerstone to Force performance evaluation and engineering impact

NAVSEA

BFIT TR	SHORT TITLE	COMPUTER PROGRAM	BARP PRI	RELATED BFIT TRs	DUAL TRACKS	ID DIFFERENCES	TRACK CORRECTNESS	ID CORRECTNESS	TRACK FILE CONSISTENCY	TN STABILITY
F 0234-VIN-010	IU 14 DOES NOT DISPLAY WEAPONS FOR LINK 11 UNITS	ACDS BLK 0 LVL F10.24B.2	2						X	
B 9333-LIN-006	IU 72 DUALING IU 55 WITH LOCAL TRACK	ACDS BLK 0 LVL 10.23B	2	9333-LIN-006 9333-LIN-020 0220-VIN-016 0227-VIN-090 143-CE1-003	X					
B 9334-LIN-022	IU 72 TRANSMITS IFF DIFFERENCE REPORTS AFTER RECEIVING AN UPGRADED MODE IV	ACDS BLK 0 LVL 10.23B	2	0010-TRU-006						
E 9287-GWA-002	IU 73 DID NOT MAINTAIN VALID MODE IV ON TRACK	ACDS BLK 0 LVL 10.23B	2							
C 9347-LIN-018	IU 72 TRANSMITTED SURVEILLANCE REPORTS WITH THE RECEIVED ID DIFFERENCE VICE THE LOCAL ID	ACDS BLK 0 LVL 10.23				X				
B 9333-LIN-010	IU 72 DUALED TPX TRACK			E1-009	X					X
A 9333-LIN-008	IU 72 REPORTING INCORRECT MODE II AND MODE III IFF ON TRACK			0005-TRU-009			X			
E 0005-TRU-020	IU 75 HAS INTERMITTENT TRACK MANAGEMENT PROBLEMS	10.23B(1)	2							X
E 9020-JFK-015	BG UNITS HAVE INCONSISTENT ID CONFLICT MATRIX IMPLEMENTATIONS	ACDS BLK 0 LVL 10.23	2				X	X		
E 9279-GWA-014	IU 73 AUTOMATICALLY ACCEPTED ID CHANGE FOR ASMD FRND TO HOSTILE WHILE DISPLAYING ID CONFLICT	ACDS BLK 0 LVL 10.23B	2				X			
B 9279-GWA-015	IU 02 DID NOT DISPLAY ID CONFLICT WHEN TRACK ID CHANGED FROM ASMD FRND TO HOSTILE	ACDS BLK 0 LVL 10.24A	2		X		X	X		
B 9334-LIN-017	IU 01 TOGGLING IFF ON TRACK	ACDS BLK 0 LVL 10.24(X)	2				X			
B 0005-TRU-010	IU 75 SWAPPED MODE IV IFF FROM ONE TRACK TO ANOTHER TRACK	ACDS BLK 0 LVL 10.23B	2						X	
A 0005-TRU-011	IU 75 REPORTED SAME MODE III IFF ON ALL AIR TRACKS	ACDS BLK 0 LVL 10.23B	2						X	
E 0165-CE1-009	IU 04 DUALING INTERNAL TRACKS	ACDS BLK 0 LVL 10.23D	2		X					X
E 0151-CE1-011	IU 64 TRANSMITS ID DIFFERENCE REPORT WITH WRONG ID	ACDS BLK 0 LVL 10.23B3	2				X			
E 0152-ENT-020	IU 04 INCORRECTLY AUTO ACCEPTS ID CHANGE	ACDS BLK 0 LVL 10.23D	2					X		
D 0227-VIN-002	IU 64 DOES NOT ACCEPT ID UPGRADE IMMEDIATELY	ACDS BLK 0 LVL I10.24	2					X		
E 0235-VIN-004	IU 64 DUALED REMOTE TRACK WITH LOCALLY GENERATED TRACK	ACDS BLK 0 LVL I10.24A	2		X					
E 0235-VIN-014	IU 14 AUTOMATICALLY ACCEPTED ID CHANGE FROM SUSPECT TO NEUTRAL	ACDS BLK 0 LVL F10.24B.2	2				X			
E 0235-VIN-016	IU 64 REPORTED TRACK WITH PROPOSED ID WHILE ID CONFLICT PENDING	ACDS BLK 0 LVL I10.24A	2				X			
E 0235-VIN-018	IU 64 IS UNABLE TO CHANGE LOCAL IDENTITY	ACDS BLK 0 LVL I10.24A	2				X	X		
E 0235-VIN-019	IU 14 PROCESSES ID DIFFERENCE INCORRECTLY HOSTILE/ASSUMED FRIEND	ACDS BLK 0 LVL F10.24B.2	2				X			
C 0241-VIN-005	IU 14 REPORTING INCORRECT MODE IV ON TRACK	ACDS BLK 0 LVL F10.24B.2	2						X	

Maintain TTP

Functional Area Improvements

Program	(TRs)	Dual Trks	ID Diff	Trk Corr	ID Corr	Trk Cons	TN Stab
AWS 2.10	(3)	2	1	2		1	
AWS 5.3.7/3A.0.9	(6)	2	1	2		**1**	
ACDS BK 0	(24)	4	9	5	4	4	3

FY 02 Selection Criteria:

- **Maturity of Implementation Requirement**
- **Code Impact**
- **Level of Multi-System Integration**

- **Lifetime (past 2007)**
- **Re-occurrence**
- **Impact to Operator**

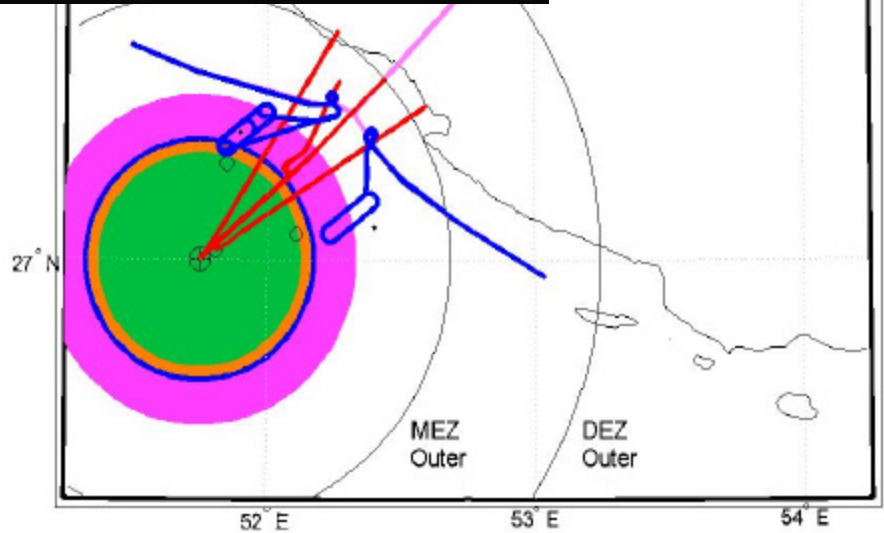### Disposition of Fleet Top Ranked BGIT Issues

Number of Issues vs Computer Program (AWS 5/3A.0, AWS 2.10, AWS 5.0, AWS 5.C, FFG L 13, SGS, LH BLK 0, CV BLK 0, BLK1, C2P Retest, C2P Model 4, GCCS-M, AUTO ID)

Legend:
- Program Office declared Invalid – Issue IAWS, Not a Platform Req., More Data Needed, etc.
- Pending - Current status indication of NONE
- Converted to Platform TR
- Correction Coded, Awaiting Completion of System Test
- Correction Fielded – Correct. May have been in process Prior to BGIT

Battle Force Defense Metric

Projected 100% TIQ2 (Data Exchange) with assumed good connectivity (DEP BFIT).

□ **Standard Engagement Scenario used for DEP/BFIT and BFIR Metrics Development**
  ➢ **Modified scenario currently used for BGSIT / ADEX**
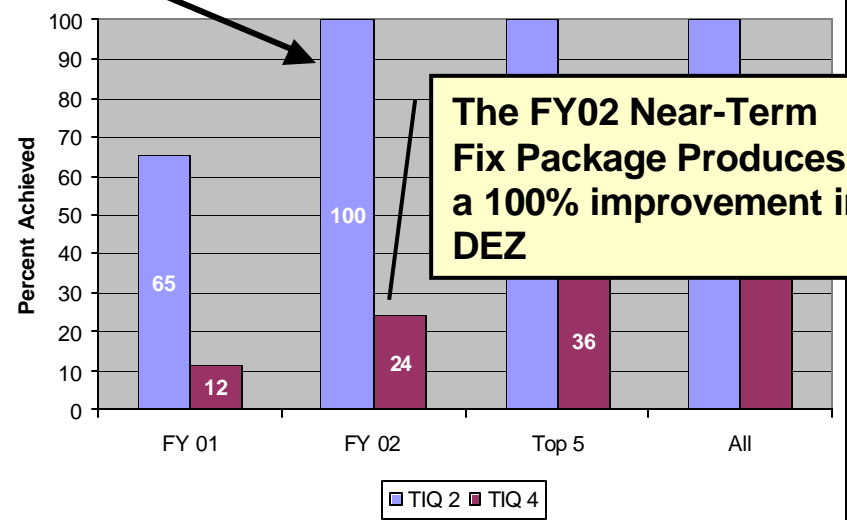 ➢ **Navy Force engagement management begins after tracks cross land-water boundary.**

Legend:
- OAB Hostiles
- DEZ Hostiles
- MEZ Hostiles
- Friends

Inc 0 BG Improvements in the DEZ

Y-axis: Percent Achieved (0–100)

Bars (TIQ 2 / TIQ 4):
- FY 01: 65, 12
- FY 02: 100, 24
- Top 5: 100, 36
- All: 100, (36+)

Legend: ☐ TIQ 2 ☐ TIQ 4

The FY02 Near-Term Fix Package Produces a 100% improvement in DEZ

Map labels:
- 27° N
- MEZ Outer
- DEZ Outer
- 52° E, 53° E, 54° E

**2 Hostile Fighter Divert Combat Air Patrol
2 Fighter Launch Missiles at the CV
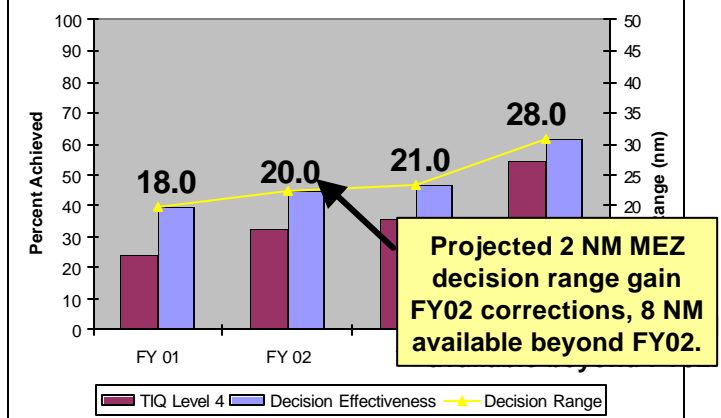ASCM Launches from shore
(Compress Scenario –
CV ~50 NM from Shore)**

Ship Self Defense/BF Metric

Inc 0 BG Improvements in the MEZ

Y-axis left: Percent Achieved (0–100), right: Range (nm) (0–50)

Decision Range line values: 18.0, 20.0, 21.0, 28.0

Categories: FY 01, FY 02

Legend: ☐ TIQ Level 4 ☐ Decision Effectiveness —▲— Decision Range

Projected 2 NM MEZ decision range gain FY02 corrections, 8 NM available beyond FY02.

FY 02 Interoperability Fix Implementation

32 AEGIS Combatants

18 ACDS Block 0 Platforms/C2P

(6) AEGIS Fixes

PMS 400 - FIX
Consolidated Test Load 5.3.8 - Dec '01
Keep SGS Config on Ship

Element / System Testing Sep 01 - Jan 02

PMS 400 Finish Testing (SCM/SQA/C&L/BFIR)

(24) ACDS/C2P Blk 0 Fixes

Blk 0 SSA – FIX
Engineering Load 10.24.X
Associated C2P Fixes

ISET / DEP Event

CSIT Testing May/June 02

ICSTF Finish Testing

NAVSEA Test predicted results OP / TTP Evaluation

Multi / DEP BGIT MAR 02

Target BG

CON BG 15-JUL-02 TCD '03 Deployment

Multi / DEP BGIT Oct 02

Target BG

TR BG 09-NOV-02 TCD '03 Deployment

FY 02 Performance Improvement will be measured during THEODORE ROOSEVELT BFIT, 28 October – 20 November 02

BFI OAG Conclusions

- The BFI OAG process works
  - A Battle Force approach to address the mismatch that occurs from introducing new technology with legacy systems
  - Making decisions based on the Battle Force "system" performance
  - Effective prioritization of limited resources
  - Allows the Fleet and engineering communities to understand the problem from a common frame of reference

- The BFI OAG Process Closes the Loop Systematically
  - Measurable interoperability improvements are being delivered today, USS CONSTELLATION and USS THEORDORE ROOSEVELT Battle Groups
  - BFI OAG process continuing in support of FY 04 and beyond deployers

The BFI OAG is the Navy's arm for improving interoperability to meet performance "mission" requirements

BACK-UP SLIDES
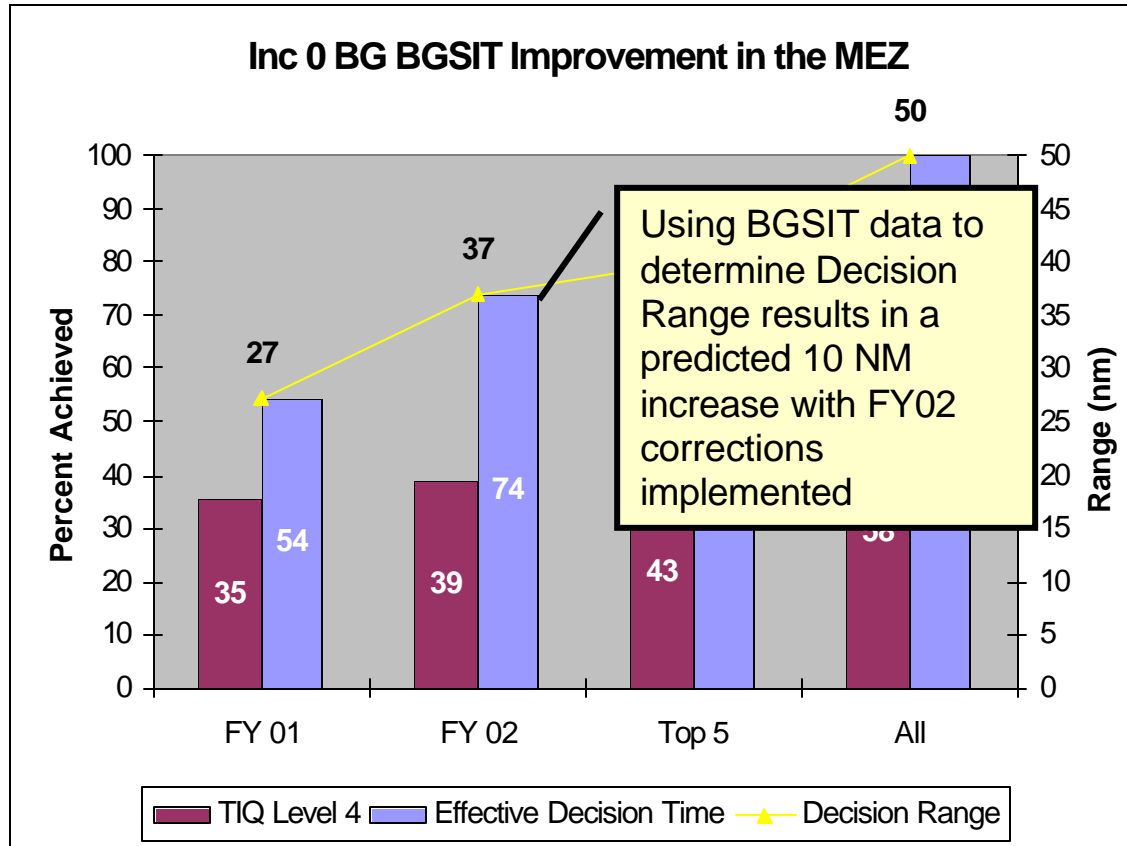
Analysis Process

- *MEAN* BFIR performance baseline calculated based upon 11 characteristic Increment 0 events:
  - Always includes ACDS BLK 0 for CV
  - As defined by BG composition, includes a mixed complement of:
    - ➢ AWS 5.3.7/3A.0.9.2, 2.10, & 1.4
    - ➢ E2C Group IIX & IIN
  - 10 Threat Targets per Event
- From measured BFIR event performance, calculated *MEAN*:
  - Probability of: Track Completeness, Track Coherency, Track Accuracy, TN Consistency, ID Completeness, ID Accuracy, ID Consistency; from calculated BFIR attributes
  - Probability of achieving TIQ from measured TIQ performance
- Input BFIR data into BFI Qualitative Performance Predication Tool
  - Includes SME input for:
    - ➢ Impact of each OAG Category (1-21) to BFIR attribute performance*
    - ➢ Impact of non-Computer Program issues on BFIR attribute performance
  - Calculated TIQ performance gain attributed to OAG specific changes
    - ➢ % Gain in probability of achieving TIQ
- Input TIQ performance gain into Air Defense Decision Point (ADDP) model to calculate predicated decision space improvements

*Captured AAW Mission Prioritization from MIL-STD guidance (1697A, 2167A, 498, etc.)

FY 02 BG Improvements
(BGSIT Data/At-Sea Environment)

Ship Self Defense/BF Metric

Inc 0 BG BGSIT Improvement in the MEZ

Using BGSIT data to determine Decision Range results in a predicted 10 NM increase with FY02 corrections implemented

Bar values — TIQ Level 4: FY 01 = 35, FY 02 = 39, Top 5 = 43, All = 58; Effective Decision Time: FY 01 = 54, FY 02 = 74; Decision Range: FY 01 = 27, FY 02 = 37, All = 50

Legend: TIQ Level 4 ■ Effective Decision Time ■ Decision Range ▲

Axes: Percent Achieved (left), Range (nm) (right)

<u>Live Event Notes:</u>
- 3 BGSITs with varying geometry
- Tracks do not follow constant inbound course
- BG Operators did not elevate ID on Hostiles above ID Unknown in Combat Systems and on TADIL
  - ➢ BG agreement on ID determined from decisions to engage
  - ➢ Assessment focus track accuracy, coherency & TN stability
- ➢ Less Objects of Interest
- ➢ Threat spacing greater in BGSIT than DEP Scenario

DEPSECDEF
Direction

- Legacy C2 Interoperable by FY 08

- Implement Strategies by 29 Mar 02

- Ensure PPBS considers legacy I/O funding requirements

- Mission critical C2 systems for the Joint Task Force

- Identify funding for the Family of I/O Operational Pictures (FIOP) as directed by the JROC

- Develop metrics for operationally determining success in overcoming legacy C2 I/O

b. Under Secretary of Defense (Comptroller): Effective immediately, ensure that the Planning, Programming, Budgeting System considers C2 legacy interoperability funding requirements. Specifically, the Comptroller in coordination with the USD(AT&L), Joint Requirements Oversight Council (JROC), and the DoD Chief Information Officer (CIO) will ensure appropriate funding for a prioritized set of overarching program initiatives beginning in FY03. Initiatives should focus on mission critical C2 interoperability for the Joint Task Force (JTF) and below; the Joint Integration and Interoperability organization; and the Joint Distributed Engineering Plant. Also, identify funding for the Family of Interoperable Operational Pictures (FIOP) as directed by the JROC. Candidate initiatives will be considered for acceleration and FY03 funding based on JROC recommendations and clear benefits to JTF operations.

c. Joint Forces Command (JFCOM): Address issues and develop material and non-material options to resolve JTF C2 legacy interoperability shortfalls. Forward recommendations to the JROC for prioritization and referral to OSD by March 29, 2002.

d. Chief Information Officer, DOD: In coordination with the USD (AT&L), the Joint Staff, and JFCOM, identify the key DoD component organizations addressing legacy interoperability, areas of duplication, and opportunities for consolidation or elimination. Provide recommendations to the JROC by March 29, 2002.

e. Chairman of the Joint Chiefs of Staff: In coordination with the USD (AT&L), CIO, DOT&E, JFCOM, and OSD(PA&E) develop initial metrics for operationally determining success in overcoming legacy C2 interoperability shortfalls. Modify CJCS Instructions, as appropriate by March 29, 2002.

f. Combatant Commands, Services and Defense Agencies: Identify opportunities for strengthening the implementation of DoD Directive 4630.5 and DoD Instruction 4630.8, Procedures for Interoperability and Supportability of Information Technology (IT)and National Security Systems. Forward recommendations to the CIO by March 29, 2002.

Please direct questions or concerns you may have to Dr. V. Garber, Director, Interoperability, OUSD(AT&L) at (703) 695-9713.
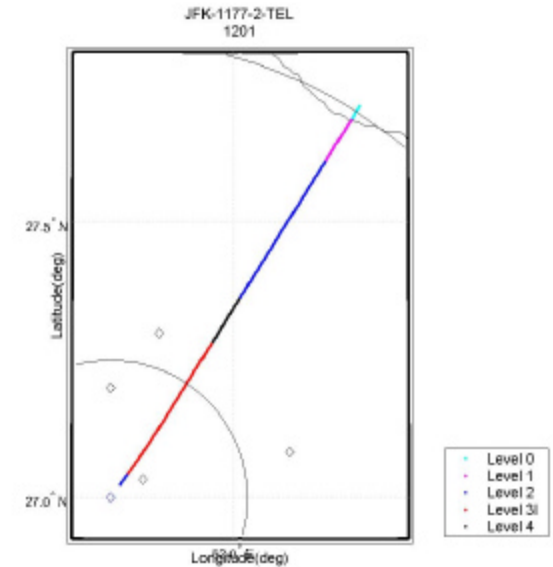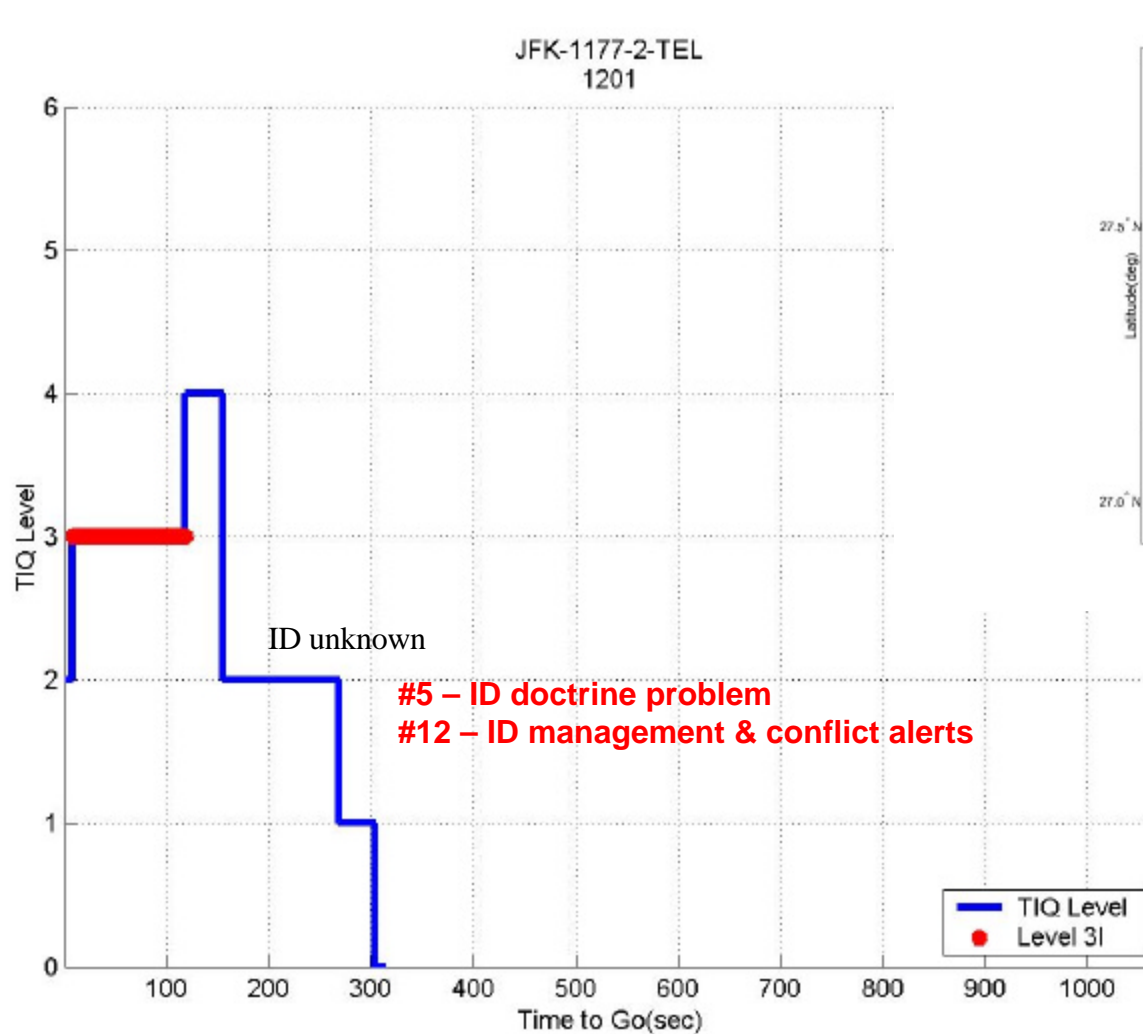
Items highlighted are fundamental elements of the Battle Force Interoperability Operational Advisory Group (BFI OAG)

BFI OAG Events To Date

Event	Date
BFI OAG ISET, Test Event 3	22-26 Jul 02
FY03 Test Readiness Review	17 Jul 02
BFI OAG Overview, CDR Patterson (CPF)	24 Jun 02
FY02 BFI OAG Test Event 2	13-15 May 02
BFI OAG Key Event 1	09 May 02
Establishment of BFI OAG web-page, https://www.bfims.nswc.navy.mil	May 02
FY02 BFI OAG Test Event 1	29 Apr-02 May 02
BFI OAG Overview, Mr. J. J. Johnson (CLF N65) & Fleet Representatives	22 Mar 02
BFI OAG Overview, CHENG Program Office Staff	20 Mar 02
BFI OAG Overview, C2P/AWS/ACDS Coordination Meeting	14 Mar 02
Battle Force Interoperability, Mr. Wynne (PDUSD)	12 Mar 02
BFI Fixes 2002-2004, Ms. Monica Shephard (CLF N6)	Dec 01
*ROM for I/O Fixes in 2002,*RADM Balisle (N76)	25 Oct 01
An Approach to I/O Improvements, Mr. Altwegg (DASN TCS)	Sept 01
An Approach to I/O Improvements, RADM Balisle (N76)	21 Aug 01
I/O Improvements, Stepping Up to Mission Capability, RADM Bowler (N70)	17 Jul 01
I/O Issue Resolution, RADM MOE (ACNO MD)	Jul 01
USS JOHN F KENNEDY BFIT TRR	31 May 01

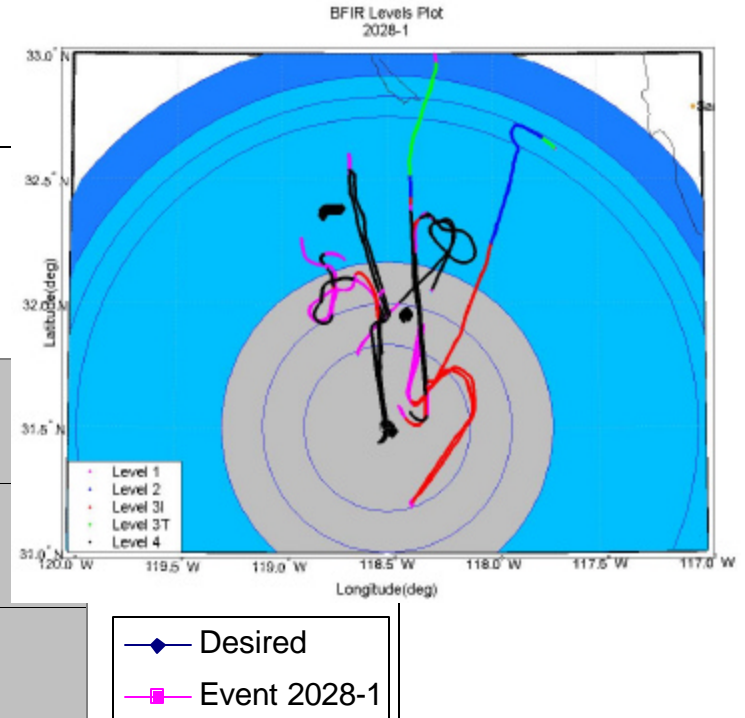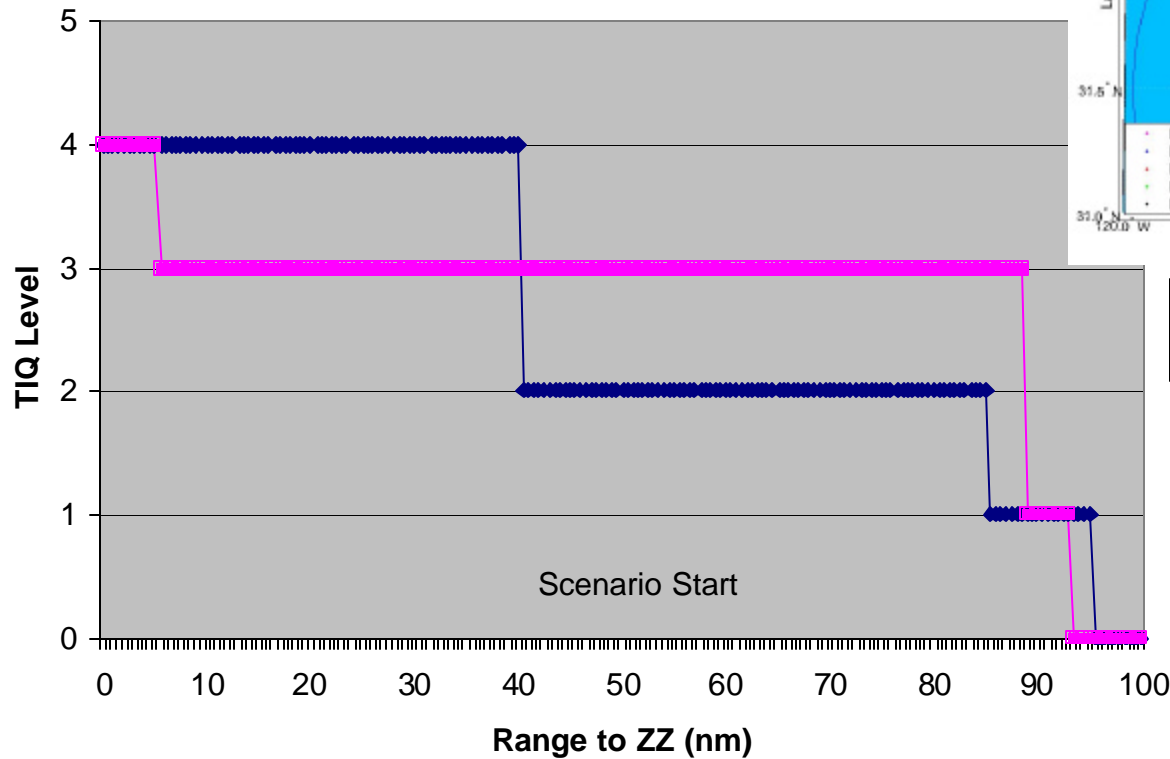*A single track example (land launched cruise missile)*

BFIR DEP 343-5 Track 1201 - Air Defense Decision Windows
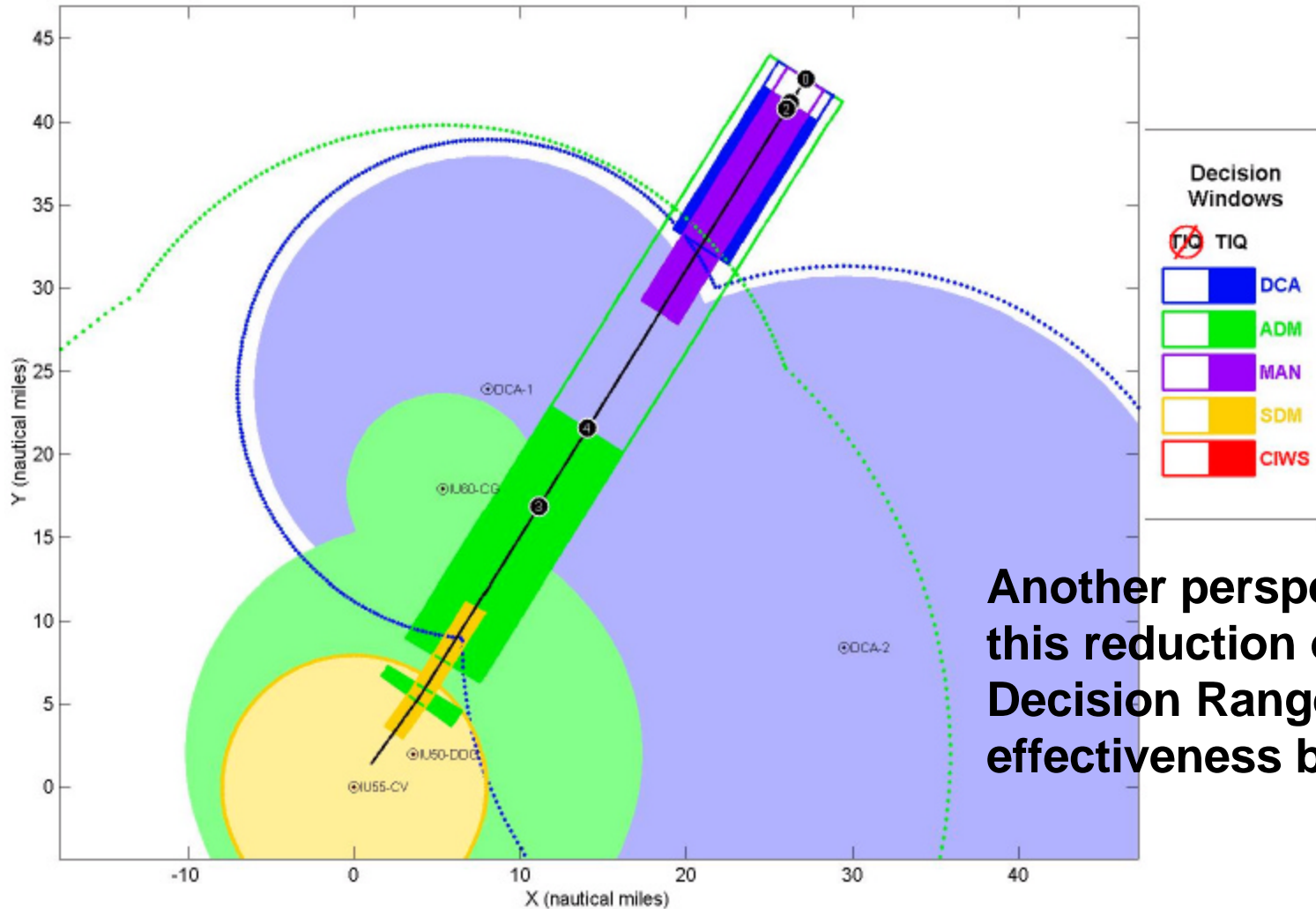
Another perspective of this reduction of SM-2 Decision Range effectiveness by 60%

TIQ first achieved plot

FY03/04 Objectives

- **Correct Fleet Interoperability Issues - FY03 Baseline**
  - 5,300 Open BFIT and BGSIT Issues captured in 21 Problem Areas
- **Focus on Warfighter benefit in Anti-Air Warfare (AAW) environment**
  - Ensure information is available to support Force-Level engagement decisions
  - Improve Situational Awareness
- **Capture issues reported by the Fleet**
  - Focus on Post acquisition / life-cycle maintenance issue sources
  - Correct issues that the Fleet has reported and/or recognizes
  - Emphasize Fleet issues not fixed by other on going acquisition upgrades

> *Improve Battle Force*
> *Operational Performance and Situational Awareness*

FY03/04 Issue Filter and Categorization

- Combine sources to single file (~5,300)
  - Includes Open & Closed
- Omitted
  - Non-Interoperability
    - Hardware, Info Exchange Effectiveness, Operator Error, Comm Faults
  - Non-AAW
  - Issues written Prior to 1999
  - Issues were vague and exact issues could not be determined from problem description
- Categorize Open Issues (~1,200)
  - Does not include Open-C and Open-E Issues
  - 21 AAW Categories Created
  - Prioritized Categories
  - Described Operational Impact for each Category
- ~829 Issues Identified and Mapped to Categories

Key Event 1
COMPLETED

WHEN: May 09, 2002

WHAT: BFI OAG Fleet Requirements Meeting

WHO: OPNAV, CFFC, BGSIT LANT & PAC, CCDG1, CCG4,
                  TACTRAGRUS, SWDG, ATRC, NAVSEA, SPAWAR, NCTSI

WHERE: DAMNECK, VA

WHY:
- Review Categorized BFI Deficiency List
- Get Fleet input/requests on work package development objectives *

* Driver of root-cause efforts, scoped alternatives to be prioritized by OAG.

HOW:
- Announce via message   — **COMFLTFORCOM 182011Z APR 02**
- Co-Chaired by CFFC N65 and NAVSEA 53
- Facilitated by NAVSEA Dahlgren/Team
- Minutes/Results published on BFIMS with summary message tickler.
     COMFLTFORCOM 181514Z JUN 02

Key Results and Briefs Published at https://bfims.nswc.navy.mil

Key Events 2 and 3

Key Event 2

WHEN: Late September 2002
WHAT: Preliminary BFI OAG
(at the 0-5 level)
WHO: OPNAV, CFFC, CCDG1, CCG4,
BGSIT LANT & PAC, SWDG,
TACTRAGRUS, ATRC, NAVSEA
and PMO's

WHERE: **DAMNECK, VA**
WHY:

- FY02 BFI OAG Brief-out
- Review FY03/04 Candidate
  Work packages
- Input Priorities for
  Flag BFI OAG

> - **Formal list of program CPCRs/TRs to be corrected**
> - **ROM Implementation Costs & Schedules Impacts**

HOW:

- Announce via message
- Co-Chaired by CFFC N65,
  OPNAV N76, NAVSEA 53
- Facilitated by NAVSEA Dahlgren/Team
- Minutes/Results published on BFIMS
  with summary message tickler.

Key Event 3

October 2002
BFI OAG Meeting
(O-6/O-7 level)
OPNAV, NAVSEA, PEO, CFFC

WASHINGTON DC

1. FY02 BFI OAG Brief-out
2. FY03/04 Candidate Work package
   Review/Prioritization
3. Document Annual BFI Priorities
4. Document funding agreements

1. Announce via message
2. Chaired by OPNAV N76
3. Facilitated by NAVSEA 53
4. Minutes/Results published on BFIMS
   with summary message tickler.

Key Results and Briefs published at https://bfims.nswc.navy.mil

1. Identify Sources & Issues

2. Filter Open" Issues

3. Categorize

Methodology

8. Approval/Fund

4. Validate Issue

7. Develop FY Work Package(s)

6. Coordinate w/SSA's

5. Conduct Performance Assessment